N.T.J. Aug. 20-08 (1.2.)

INDEX.

PETROLEUM.

Petrolcum vs. Coal for generating steam, 1.
Petroleum Review, 2, 21, 41, 57, 73, 89, 105, 121, 137, 153, 169, 185, 249, 265, 286, 297, 313, 329, 345.
West Virginia Oil Region. 33.
The immense development of Petroleum, 34.
An Oil Lake in Trinidad, 34.
Paraffin, 35, 82.
The Kanawba Oil Wells, 35.
Recent formation of Petroleum, 49.
Discovery of Petroleum at Mud Creek, 50.
Coal Oil vs. Coal, 65.
Specific gravity of Coal Oil, 65.
On the action of Oil Wells, 81.
Wallachian Petroleum, 82.
Pennsylvania Oil Well Companies, 82.
Oil in Clarion county, 83.
Supposed Animal Origin of Petroleum, 97, 130, 306.
Have you got oil, 98.
Coal Oil for wounds, 99.
Petroleum as fuel, 113.
Petroleum Springs of the U. S., 113.
Facts concerning the Oil Wells, 114.
Decrease of Petroleum imported into England, 114.
The Greene and Fayette Oil excitement, 114.
Sherman Oil Company, 114.
Oil Companies in Philadelphia, 121.
Petroleum Region of Southwestern Pepsylvania, 145.
Petroleum Companies, 146.
Instruction for burning Petroleum, 146.
Petroleum in Western Virginia, 146.
What it costs to sink an Oil Well, 146.
Production and application of Petroleum, 146.
Petroleum as fuel, 161.
Coal Oil—its early history, 162.
Liquid Hydro-Carbon oils used for lamps, 177.
Oil Producing Regions in England, 178.
Discovery of Petroleum, 193.
The divining rod used to find oil, 193.
Oil in the Ohio Valley, 209.
Discovery of Rock Oil on the North river, 209.
What oil lands on Oil Creek are worth, 216.
The first oil man yet poor, 216.
Petroleum in Nevada, 216.
Crockers Oil Ejector, 216.
New and curious oleaginous history, 225.
Extraordinary discoveries of Petroleum in coal, 226.
Petroleum, Paraffin or Mineral oil, 226.
Petroleum in Venezuela and New Grenada, 226.
Petroleum in Cuba, 227.
European Petroleum, 227.
Petroleum discoveries, 230.
Oil vs. Gas, 231.
The phenomena of oil wells on Oil Creek, 241.
Petroleum as a fuel for steamships, 243, 343.
Troubles of shipping oil from the wells, 243.
Oil on the Clarion, 244.
Oil bearing rocks of Canada, 257.
Oil Wells in the Sea of Azoff, 257.
Sugar and Petroleum—Barbadoez, 257.
Oils used to Carbonize Wood, 257.
Cotton Farm Oil Company, 257.
How Oil Wells are Sunk, 273.
Petroleum as a Steam fuel, 274.
A great Oil Enterprise, 274.
A Tank Car, 275.
Oil in Somerset County, 275.
History of Petroleum, 289.
Petroleum in California, 290.
Petroleum Items, 296.
Petroleum—some of its uses, 305.
Very Ancient Petroleum Wells, 305.
Petroleum—what it is, how it is refined, 305.
Petroleum as a fuel, 306.
Western Petroleum Items, 311.
Antiquity of Petroleum, 313.
Geography, Chemistry, Geology and Mineral Oils, 321.
The first Petroleum Well, 322.
Early description of Oil Springs, 322.
The Danger of Striking Oil, 323.
Distances from Franklin in the Oil Region, to Philadelphia and New York, 323.
Oil in Mexico, 328.
Oil in the Southern Ohio and Western Virginia, 337.
The Source of Petroleum Geologically Considered, 338.
Oil everywhere, from the Atlantic to the Pacific, 338.
Oil in Nevada, 343.
A New use for Petroleum, 344.
West Virginia Petroleum Regions, 353.
Petroleum in Colorado, 353.
Oil in California, 353.
Our Petroleum Interests, 353.
Bituminous Shale, 354.
Butler county, Pa., 354.
A New Era in Petroleum Mining, 369.
Alleged errors in Petroleum Prospecting, 369.
Treating Pretroleum, 359.
The Genuine Article, 360.
Trinidad Petroleum, 374.
Petroleum as a Steam Fuel, 375.

MINING.

First Monthly Shipment of Copper, 3.
Timely Strike, 3.
Another Strike, 3.
Rich Quartz, 3.
Quartz Ledge, 3.
Palmyra District Claim, 3.
Mining at West Point, 3.
Kentucky Company for Mining, 3.
New Coal Company, 3.
Good yield of Gold, 3,
Struck it Rich, 3.
Lady Bryan Mine, 3.
The Fuller Copper Company, 3.
Buckeye Claim, 3.
Struck their Ledge, 3.
Improvement in Working Bars of Gold, 3.
The Largest Shaft, 3.
No Loss without some Gain, 3.
Reducing Capital Stock, 3.
Dissolution of Tajo Mining Company, 3,
Truly liberal, 3.
Good Return, 3.
Dissolution of Kentucky Copper Mining Company, 3.
A Mining Share sale in Victoria, 3.
Devon Great Consols, 3.
What Coal is, 17.
Great Blast, 17.
Girard Copper Mine, 17.
Arizona, 18.
Reliance Mining Company, 18.
Gould & Curry Improvements, 18.
Coal on the west side of the Susquehanah, 18.
Mining on Lake Superior, 18.
Enterprise in California, 18.
Props and Supports for Mines, 18.
Valuable Copper Mine, 18.
Improvements in Stamp Letters, 18.
Pulverizing and Mixing Iron ores, 18.
Mariposa Company, 19.
Gold on Lake Superior, 19.
Rich Pay Dirt, 19.
Something of a depth, Mine, 19.
Ages of Stone and Bronze, 19.
Visit to Gould & Curry Silver Mine, 20.
The Mechanical and Chemical treatment of Metals, 36,
The Plattner Chlorine process for Mines, 37.
Silver and Copper in Utah, 37.
A New Mining Process, 37.
River Mining in California, 37.
A Pan for Dry Crushing, 38.
New Amalgamator, 38.

Dorchester and St. Mary's Copper Mine, 38.
On the Mechanical Dressing of Ores, 50.
No Cause for Desponding, 51.
How Granite was found, 51.
Analysis of Iron Ores, 55.
Quincy Copper Mining Company, 55.
Description of the Mineral Blast, 66.
Profitable Mining in America, 67.
Report, Columbia Gold Mining Company, 67.
The Old Mines of Mexico, 68.
Mineral Statistics of Great Britain, 68.
Gold and Crystal, 68.
Depth of Coal beds, 68,
Electricity in Mining Operations, 83.
Lignites, 83.
Separating Gold and Silver from Quartz, 84.
Barrel Quartz, 84.
Improvement in Pressing Gold and Silver Ores, 84.
Mining and Milling in Nevada, 84.
New Method of Smelting Lead Ore, 84.
Etna Empire, Resolute and Girard Copper Mines, 85.
Lighting Mines, 85.
Ductility of Gold, 87.
Passing under a Cloud—Mining Interests, 99.
Purification of Gold, 99.
Coal found in Brazil, 100.
Coal in Mont Cenis Tunnel, 100.
Faulkner's Electric pit signals, 100.
Nova Scotia Gold, 100.
New Patent for separating Silver and Gold from Lead, 100.
Mining in Southern Sierra, 100.
Accidents in Mines in England, 100.
Mines in France, 100.
Irish Mining Company, 100.
Gold Production, 100.
Copper Smelting at Detroit, 115.
Washing Ores and Minerals, 115.
The Extraction of Silver, 115.
The Iron business of Lake Superior, 115.
Mining Shafts at Washoe, 115.
The Iron trade of the World, 115.
Profitable Mining in Great Britain, 116.
How Coal is handled and breakage saved in London. 116.
Mineral Resources of the U. S., 119.
Metallurgical Industry in Belgium, 131.
Mineral Wealth of Turkey, 131.
Mining in New England, 131.
New Mining Company Law in Australia, 131.
Large increase of English Exports of Coal, 132.
London Coal Trade, 132.
The Underground Engine of the Gould and Curry, Mine, 147.
Important Coal Discovery, 147.
Death of six Miners, 147.
Coal Discovery at Martha Sound, 147.
Washoe's Black Diamond, 148.
Law decisions in reference to advances, &c., 148.
Coal in China, 148.
Coal in Nevada, 148.
Lead smelting by Rachette's furnace, 152.
Aluminium, 152.
The Dubuque Lead Region, 163.
Ancient Mining Machinery, 167.
New developments in Grass Valley, Nevada, 178.
Gold Mines of Nevada, 179.
Hand Quartz Mills, 179.
Law decisions in reference to Stockholders, 180.
Coal Dust, 180.
Increased explosiveness of Mining powder, 180.
Gold Qurtz crushing in Siberia, 180.
Erosion of Lead by Insects, 194.
Health of Miners, 194.
Vital Statistics 195.
On the Mechanical dressing of Ores, 195.
On the Method of Extracting Gold, 196.
Valuable Minerals in California, 196.
Great deposit of Lead Slag in Gerard, 201.
The Colorado Gold Region, 212.
Utilization of Small Coal, 212.
Mineral Wealth of Turkey, 212.
Virginia City underground, 213.
Discovery of Emery in Chester, Mass., 227.
Our New Gold and Silver Territories, 228.
The Sulphur Mines of Formosa, 229.
The depth of Coal Beds, 228.
Annual Report of the Gould and Curry, 244.
Canadian Miners Association, 245.
Tin Stone, 245.
A Flourishing Mine, 245.
The profits of Germain Mines, 245.
Iron rust, 246.
Ruby and Sapphire, 246.
A rich quartz strike, 258.
A Mining Phenomenon, 258.
The Extraction of Gold and Silver from Ores, 258.
A Quicksilver Mining Company, 258.
Remarkable Silver Mine in South Utah, 259.
Coal in France, 259.
Assays in Silver and Salt, 259.
Hot water in Mines, 259.
The extraction of Gold and Silver from their Ores, 275.
Grass Valley, Nevada, Mines, 276.
Product and Area of the Mineral Domainsof the U. S., 276.
Gold and Silver crop of the Pacfic States, 1864, 277.
How a Lake Superior Coppor Mine pays, 277.
The Genii of the Miners, 277.
La Favorita Mining Company, 277.
Pacific Coal Mining Review, 1864, 277.
Copper Mining on Lake Superior, 278.
The American Exploring Company, 278.
Good Hope Gold and Silver Mining Company, 278.
The Redan Gold Mining Company, 278.
Very rich rock, 278.
Rich Silver Ore, 279.
Mining Incorporations in California in 1864, 280.
Destination or Distribution of the Gold Products of the U. S., 292.
Mines and Iron Works of Prussia, 293.
A Mining and Transportation Company, 293.
Copper—its use &c., 307.
Mineral Resources of Michigan, 307.
Rich rock, 307.
Anthracite Coal, trade of the U. S., 308.
Coal—its bearing on Modern Civilization, 323.
Richness of Ores, 324.
The Coal and lignite production of Austria, 324.
Mining in Oregon, 324.
Geology and Mining, 339.
Stone Coal of Bohemia, 340.
Coal trade in Spain, 341.
Substitute for blasting-powder, 341.
Gun Cotton in Mining operations, 342.
Mineral resources of Mexico, 344.
Mining in Turkey, 344.
Grey Eagle Silver Mining Company of Nevada, 354.
Gold—Colorado, 355.
Copper and American Copper Mines, 356.
Quartz Mining, 356.
Platinum, 356.
Crosby and Thompson's Gold Saving Process, 370.
Coal Washing Machines, 370.
Washing Gold Ores, 358.
Canel Coal, 358.
Chinese Miners in Shasta county, Cal., 360.
The Mariposa Estate, 374.
Ventillating Mines, 374.
Satisfactory Returns, 375.
The Great Mass of Native Copper ,375.
Mining in Australia, 375.
Minerals in New Hampshire, 375.

GAS.

List of Gas Light Companies, 4.
Making Steel from Iron with Gas, 9.
Brighton and Hove Gas Company, 9.
London Gas Companies, 9.
Dr. Letheby's Lecture on the Chemistry of Gas-lighting, 22.
Improvements in Manufacture of Gas, 23.
Water Gas, 35.
The Portland Gas-Light Company, 36.
Portsmouth, N. H. Gas Company, 36.
General Remarks upon Water Gas, 51.
Artificial Illumination, 69.
Gas Cannel Coal, 70.
Patents relating to Water Gas, 85.
Crystal Palace District Gas Company, 101.
Position of Gas Companies in England, 101.
Continental Union Gas Company, England, 101.
Improved Manufacture of Gas, 101.
Luting for Gas Retorts, 101
A New Method of Gas Analysis, 117, 132, 149.
An Improved Stove for Cooking by Gas, 118.
Carbonization of Illuminating Gas, 133.
New Gas Lighting Apparatus, 133.
Gas in England, 133.
Soda in Coal Gas, 133.
Crystal Palace District Gas Co.'s Report. 133.
Measurement of Gas, 250.
Gas in Egypt, 153.
Gwynne upon Water Gas, 165.
New Hydro-Carbon Light, 166.
Artificial Light and Lighting Materials, 180.
Are Gas Holders liable to Explosion, 181.
Gas applied to Lighting Railway Carriages, 185.
Impurities in Gas, 197.
Retorts—Introduction of Hot Air to increase quantity of Gas, 200.
Quality of Gas in London, 213.
Gas in Paris, 213.
Wood Gas, 293, 230, 247, 260.
The Manhattan Gas Company, and Lighting the City Lamps, 247.
The War upon the Gas Companies of London, 260.
Purifying Gas by Oxide of Iron, 279.
Gas Burners, 168, 184, 279.
Purification of Gas by Sulphuret of Carbon, 279.
Gas Lighting in Austria, 279.
Gas Regulators, 279.
Fearful Gas Explosion, England, 279.
The Aubin Wood Gas Process, 298.
Gas Explosion in Liverpool, 294.
Rio Janeiro Gas Company, 294.
Thirteenth Annual Report of Philadelphia Gas Works, for 1864, 309.
A New Gas Generator, 326.
The Gas Works of London, 326.
Gas in London, 341.
Gas Lighting of Moscow, 341.
Parisian Gas Company, 342.
Supply of Gas in the City of London, 357.
Removal of Bisulphide of Carbon from Gas, 357.
Hot Gas Engine, 357.
Gas Stoves, 376.

WATER.

Water Elevator, 9.
Ancient Bucket Engine, 9.
Water Meters in Philadeldhia, 9.
Report Water Registrar, Washington City, 20.
Water Supply of Paris, 21.
Water Engine, 21.
Water Works of Waterford, N. Y., 21.
Detroit Water Works' Report, 38.
San Francisco Water Works, 38.
Use of Water with Fuel, 38.
A New Water Wheel, 38.
Water Works at Chicago, 54.
Water Supply at Naples, 89.
Water Works in England, 101.
Consumption of Water, 102.
Water Supply of Naples, 102.
Water Supply of Paris, 102.
The Dublin Water Works, 102.
North Brazil Water Company, 102.
Seventeenth Report of the Board of Water Committee, Jersey City, 134.
Presentation of Silver Cup to Col. A. W. Von Schmidt, 135.

Water Supply for Paris, France, 135.
Water Supply of London, 151.
Water Supply of Madrid, 167.
Aqueducts, Ancient and Modern, 182.
Supply of Water to Cities, 197.
Chicago Lake Tunnel, 199.
The Albany Water Meter, 214.
Report of Water Works, Philadelphia, 1864, 261.
Weight of Water in Pipes, 280.
Fifth Annual Report of the Brooklyn Water Works, 327.
Croton Board difficulty, 342.
Water Lifts *vs.* Hydraulic Lifts, 357.

MISCELLANEOUS.

Submarine Cable of the World, 2.
Equivalents in Force, 2.
Scientific Expedition to Mexico, 2.
To our Patrons, 8.
To our Readers, 8.
Necessity of Mining Engineers, 8.
Olate of Coal—new fuel, 8.
An Enormous Iron Field, 9.
How to render Ivory flexible, 9.
The Numbers of Patents, 9.
How to Prevent Wet Feet, 19.
Photo-Sculpture, 19.
Testing Oils by their Cohesive Figures, 21.
Buried Forest, 21.
Mining Enterprise, 24.
Rice introduced in South Carolina, 24.
Scientific Articles—translated, 25.
A New Light, 25.
The Bowie Knife, 25.
The New Tax Bill. and its Provisions, 25.
The Machinery of the Human Body, 25.
A Practical Invention, 38.
Scientific Intelligence—translations, 39.
A Neglected Source of Wealth, 40.
Exorbitant Gas Bills, 40.
Gas Burners, 40.
Standard Gold Company of Colorado, 41.
Important Discovery—Iodine, as a disinfector, 41.
Formation of Iron by Metallurgical Insects, 41.
The Inventive Genius of the United States, 56.
Scientific Intelligence—translations, 56.
Fishing by Electric Light, 57.
Where Ivory comes from, 57.
Depth of the Sea, 57.
A Ton of Coal—what it is, 57.
Peat, 57.
Heat and Light, 57.
Chapapote in Cuba, 70.
Scientific Intelligence—translations, 70.
Increase of Manufactures in the United States, 71.
Pumping to No Purpose—a Problem, 71.
Ore at Mine La Motte, Missouri, 72.
Effect of Temperature on the Volume of Bodies, 72.
Where the Confederates Get their Coal, 72.
Discovery of Roman Remains at Chedworth, 73.
Changes of a Piece of Silver, 73.
Good Advice from Journal of Health, 73.
Vast Armies, 86.
Mechanical Hair Brush, 86.
Recipe for Making Diamonds, 87.
Statistics of the Globe, 87.
Gunpowder—a New Invention, 87.
Heat and Force, 87.
How Birds Cling to a Limb, 87.
Soldering Water Pipes, 88.
Manufacture of fatty Acids for Candles, &c., 88.
American Lamps in England, 88.
Tax on Mineral Oil, 88.
A New Gas Engine, 88.
Important Improvement in Photographing, 89.
Nature Playing at Mud-Pies, 89.
Medical Properties of Silk, 102.
Feather Beds, 102.
Force of Tornadoes, 103.
Old Things, 103.
Impurities of the Atmosphere, 103.
The Press—What is it, 103.
Boats—How to be Made, 103.
Gas Foot Warmers, 104.
Water Meters, 104.
Solubility of Paraffien, 104.
Properties of Benzine, 104.
The Closing of Life, 105.
Ocean Waves, 105.
An Electric Telegraph without Wires, 105.
Shingles rendered Fire Proof, 105.
The Human Eye. 105.
An Old Canal in Egypt, 116.
Frugality of the American People. 118.
Worth Knowing—Weights, &c., 118.
Central Park—Area, &c., 118.
Detection of Blood Stains, 119.
Elements of Food, 119.
Statistics of the Parisian Dead House, 119.
Prices in the Revolution, 119.
A New Alloy, 120.
The Great Mining Era, 120.
The Philosophy of Bathing, 120.
Butter as a Re-agent for Copper and its Compounds, 121.
Magnesium Light no Novelty, 135.
A Light Superior to Gas and Calcium, 135.
Treating Tar and obtaining Products therefrom, 136.
Electric Light, 137.
Railway Working Expenses, 137.
Mineral Traffic on Railways, 137.
Peat Grease as a Lubricant, 137.
Steam Engines in Prussia, 137.
The New Light--Magnesium, 151.
More Salt Discoveries, 151.
How is Coal Oil or Petroleum Produced, 152.
Officers of Petroleum Stock Exchange, N. Y., 152.
Natural Ventilation Interpreted, 153.
Moisture on Lamp Chimneys, 163.
Practice with Superheated Steam, 167.
John Fitch—first Inventor of Steamboats, 167.
Economy in Use of Coal, 167.
Patent Gas Burners, 168, 184.
New School of Mines, Columbia College, 168.
Value of a Patent. 169.
Copper in the Sea, 182.
Alligator's Nests, 182.
Complimentary to American Inventors, 183.
Perpetual Motions, 183.
Process of Amalgamating Gold and Silver, 163.
Apparatus for Separating Quartz, 183.
Ingenuity of the Germans, 183.
New Process for Extracting Sulphur from Coal, 183.
Boring Oil Wells with Diamonds, 183.
Colors Produced from Petroleum, 183.
Paraffined Wood, 183.
Test of Gold, 183.
Gas Leaks, 184.
Fire at Brooklyn Gas Works, 184.
Test of Death, 184.
How Sparrows found their way in Cuba, 185.
A Miner Starved to Death, 185.
The Late Professor Silliman, 199.
Patent Office Statistics, 199.
Earthquakes—a New Theory, 199.
Preservation of Iron in Water, 199.
Indestructible Writing, 199.
The New Year, 200.
Origin of Brandy, 214.
Fishes Travelling by Land, 214.
Secrets of Magic, 215.
Researches on Spots of Blood, 215.
An Iron Letter, 215.
Mantel Ornaments, 215.
Breaking Rock by Fire, 215.
Petroleum Speculations, 216.
Magnesium Light, 230.
A New Hydraulic Power, 231.
Idaho—Prospects, &c., 231.
Artificial Fuel, 231.
Oil at Fiskill—in reference to, 232.
Coal Product of Pennsylvania in 1864, 232.
Uses of Petroleum, 233.
A Fire Extinguisher, 233.
Exports of Petroleum, 233.
Opening of Petroleum Stock Exchange, 233.
Oil at Fishkill—reply in reference to, 244.
Thin Sheet Iron, 247.
Gas Companies and Gas Consumers, 248.
A New Use for Magnesium, 248.
Odor of Flowers, 257.
English Coinage of 1863, 259.
An Ossified Man, 259.
Possible Conditions of Geological Climate, 262.
Crystals of the Human Breath, 263.
Various Sources of Vegetable Oils, 263.
A Matchless Match, 263.
Iron Manufacturing among the Africans, 263.
Internal Revenue Tax, paid by Iron and Oil, 263.
Potroleum, Coal Oil, Bitumen and Asphaltum, 264.
Photography in Natural Colors, 264.
Steam Superseded—Electro Magnet, 264.
Geological and Physical Features of Pacific Coal Petroleum Company's Oil Property, 279.
Chemistry of Coal, 280.
Weight of Water in Pipes, 280.
Temperature and Weight of Atmosphere at Various Heights, 280.
New Safety Lamp, 280.
The First Needles, 294.
Temperature of the Earth and the Air, 294.
The Suez Canal Company, 294,
The Trans-Atlantic Cable, 294.
Artificial Marble, 294.
Fire from Dark Rays, 295.
Fresh Beef from Salt Junk, 295.
Silk Manufactory of the U. S., 295.
An Important Mineral Discovery, 295.
Size of Water Atoms, 295.
A Tax upon Crude Petroleum, 296.
A New Electric Machine, 296.
Glycerin—Article by W. J. M. Gordon, 310.
The Secrets of the Deep, 307.
To Increase the Strentgh of Vinegar, 310.
The Embalming Process, 311.
The Fortunate Inventor, 311.
The Rebel Patent Office—List of Incomes, 311.
Justice—Manhattan Gas Company, 312.
Death of Abraham Lincoln, 312.
Magnesium Light, 326.
How Rain is Produced, 327.
New Fuel, 327.
A Long Stretch—Atlantic Cable, 327.
Testimonial to Commissioner of Patents, 327,
Thin Sheets of Iron, 328.
Electricity, 328.
New Application of Photography, 328
New Preparation of Paper, 328.
How London is Drained, 343.
The Nozzolette—for Candles, 343.
Suspended between Heaven and Earth, 343.
Magnesium and its Light, 343.
New Bituminous Substance from Brazil, 343.
Vegetable Origin of Diamonds, 357.
Another Sheet of Thin Iron, 357.
Thin Sheet Iron, 357.
Miner License, 358.
Future Existence, 358.
Toad in Limestone, 358.
Mount Etna, 359.
Pressure of the Atmosphere, 359.
Use of Waste Heat in Kilns, 359.
How to Cleanse Quick Silver, 359.
Waste of Metals in Coins, 359.
Artesian Wells, 359.
On Spontaneous Combustion, 359.
What is a Ton of Iron, 359.
Peat, 360.
A New Blasting Gunpowder, 360.
Explosive Liquid, 360.
Aerial Navigation in Europe, 371.
Microscopic Life, 373.
Modern Means of Information, 373.
The Miracle of Nature, 374.
Tar in Maine, 374.
Statistics of Magnesium, 374.
Action of Sea and other Water on Metals, 375.
Metallic Ceiling, 375.
A Rival of Coal Oil, 375.
Paper Pipe, 375.
The First Iron Ship, 375.
Scientific Expedition to Brazil, 375.
Breathing in Smoke and Poisonous Vapors, 376.
New and Wonderful Discovery, 376.
Different Kinds of Oil, 376.